

A N A C O N D A

**COPPER  
BRASS &  
BRONZE**

*Throughout Your Home*

**ROOFING**

**WATER PIPES**

**HEATING LINES**

**HOT WATER TANKS**

**SCREENS**

**WEATHER-PROOFING**

**DAMP-PROOFING**

**THE AMERICAN BRASS COMPANY**  
GENERAL OFFICES • WATERBURY • CONNECTICUT

## THE BEAUTY • VALUE • ECONOMY OF YOUR NEW HOME

cannot be maintained for long unless you guard against RUST. • Therefore consider carefully all the advantages and the economy of these durable, non-rusting

## ANACONDA PRODUCTS



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## COPPER, BRASS AND BRONZE

### *in the Home*



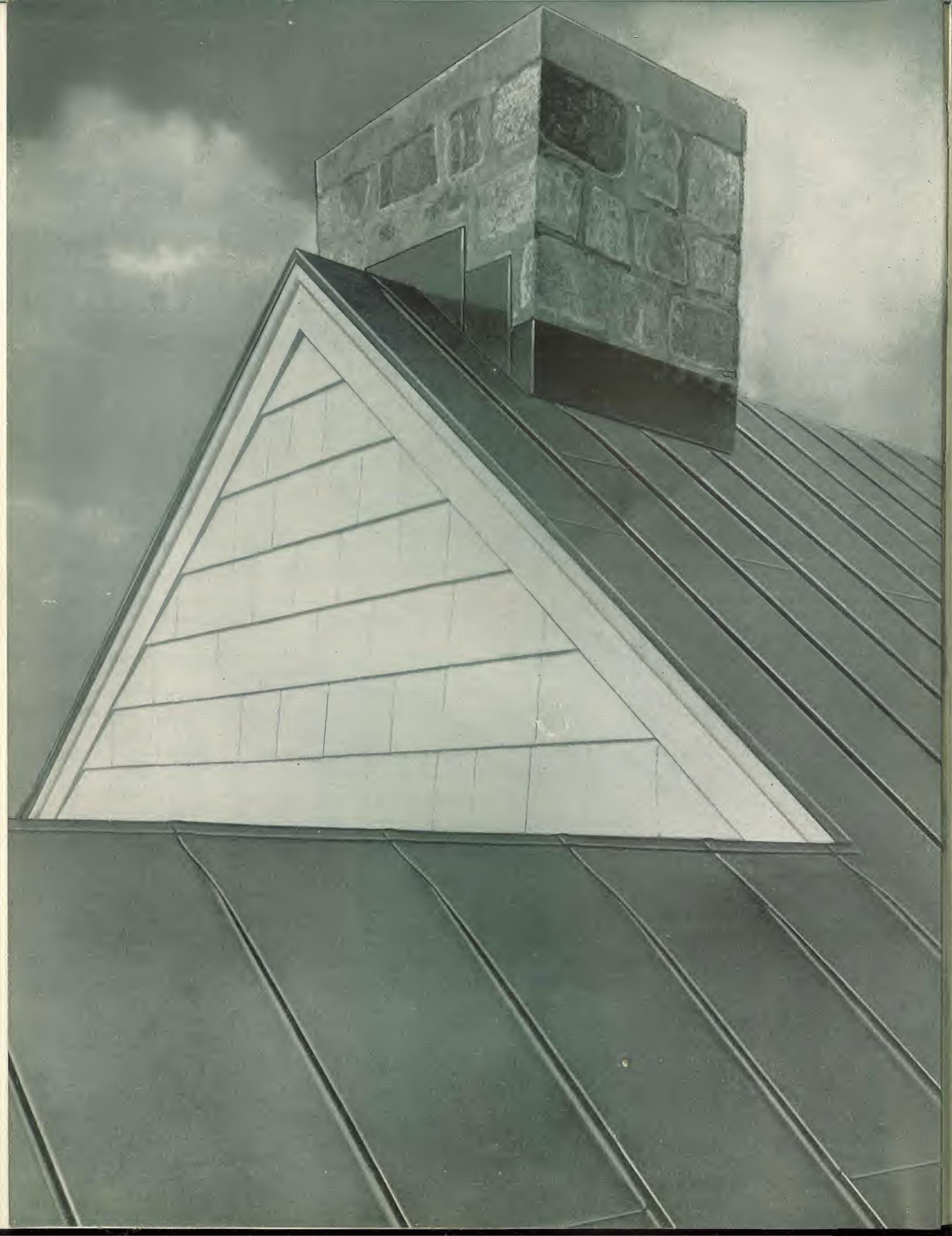
**I**N BUILDING A NEW HOME, you naturally want the most value for every dollar you spend. To make certain of this, care must be exercised to distinguish between what is really important and what only *seems* important. There are many desirable things—accessories that are useful but not essential—on which action can be postponed.

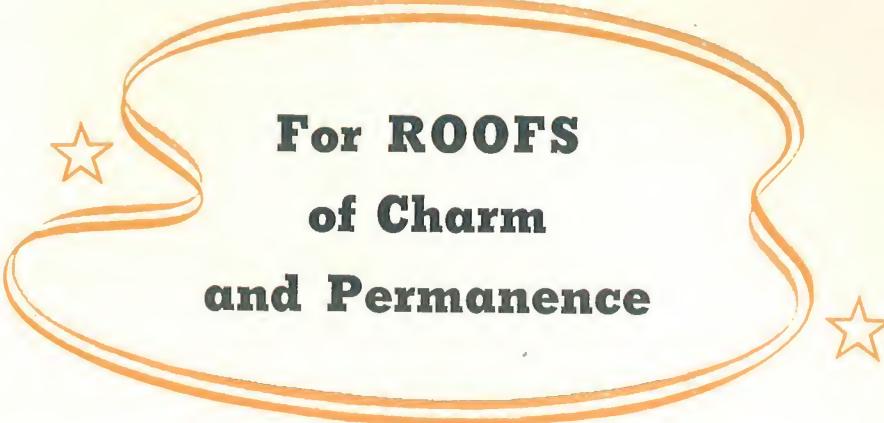
But there are other things that are vital; matters of sound construction—*fundamental* things, too often overlooked, that mean so much to the enjoyment of your home in after years. Such things, for example, as water pipes and storage tanks . . . roofing, roof flashings, gutters and

rain pipes . . . window and door screens.

These items, all of them important, are frequently neglected because they seem but incidentals; neglected in some instances so badly that they soon constitute a burden of upkeep and repair expense that strains the family budget and takes from home ownership much of the pleasure it should rightfully hold.

*The ANACONDA PRODUCTS described on the following pages are giving rust-free, trouble-free service . . . and saving money . . . for thousands of homeowners who have had the foresight to provide for the future by spending a little more at first for rustless copper, brass and bronze.*





**For ROOFS  
of Charm  
and Permanence**

## **COPPER IS THE FINEST MATERIAL YOU CAN USE**

FOR CENTURIES copper roofs have adorned palaces, cathedrals and state buildings throughout the world; for such monumental structures the superiority of copper roofing has long been recognized. It has provided both stateliness and charm, warmth yet dignity, and the economy of permanence.

\* \* \*

To the home, copper roofing brings rich appearance and a note of character and quality. The effect becomes increasingly beautiful as the copper ages and attains the mellow antique color that is so highly prized and valued for decorative purposes.

\* \* \*

Copper roofing, rustless and durable,

combines to a degree unrivaled by any other material these important qualifications: It is water-tight, permanent in spite of time and weather, relatively light in weight, non-inflammable and safe against flying embers. Snow and ice do not adhere readily to its smooth surface. It is easily installed, and above all most economical over the years.

\* \* \*

Copper roofing is now available at a cost which makes its use practical even for the small home—a cost well expressed in the name *Economy Copper Roofing*. This Anaconda product is described in detail on the following pages.



*Designed by J. Robert Swanson, Architect, this home was built in a wooded section of Detroit, Mich.*

## **ANACONDA** **ECONOMY COPPER ROOFING**

THE COPPER USED for the many outstanding roofs in this country and abroad has weighed 16 or more ounces to the square foot—resulting in a more costly roof than the average homeowner could afford.

With the development of ANACONDA ECONOMY COPPER ROOFING, an attractive standing seam roof of this time-tried metal can be installed according to traditional

methods at a saving of approximately one-third the cost of sheet copper roofing heretofore used.

You may well wonder that this cost reduction could be achieved without some sacrifice in the important qualifications of watertightness, durability and beauty. The two-fold reasons are: 1—Narrowing the sheets to a width of 16 inches reduces seam spacing to a point in keeping with

smaller roofs, and makes possible the use of thinner metal without sacrificing the strength, rigidity and wind resistance obtained from thicker sheets with wider seam spacing. This new design has permitted establishing the weight of ANACONDA ECONOMY COPPER ROOFING at 10 ounces per square foot. 2—These lighter weight sheets, being more workable, are more easily and quickly formed and assembled by experienced sheet metal contractors. This reduces installation expense.

That a copper roof at such savings provides an entirely new standard of economy will be apparent from the following specific advantages:

**Appearance**—Copper increases in beauty with age and service. Under most atmospheric conditions, the metal takes on a color similar to statuary bronze and eventually acquires the characteristic, velvety green patina which blends so well with stone, brick, wood and foliage. This patina also serves a useful purpose in that it forms a natural protection for the copper underneath.

**Durability**—The durability of copper is traditional. The hottest sun cannot harm it. Below-zero weather leaves it unaffected. For generations copper roofs have protected Christ Church in Philadelphia, the Trinity Church in New York, and the State Capitol in Boston—to mention but a few well-known American examples. And in Europe there are countless instances of similar long-lasting installations.



*This home in Darien, Conn., was roofed by the N. Hamilton Company of Stamford.*



*Economy Copper Roofing on a house in Marblehead, Mass., designed by Donald C. Goss, Architect.*

**Maintenance**—A copper roof, correctly installed, requires no further attention. Of all forms of metal roofing, the standing seam type is the most satisfactory and inexpensive to install. It provides adequately for expansion and contraction.

**Fire-Proof**—A copper roof eliminates the flying spark hazard, thus earning a lower insurance rate.

**Snow-Free**—Snow and ice do not readily adhere to the smooth surface of a copper



Standing seam copper roofing is well adapted to homes like this one in Detroit, Mich. Earl Confer, Architect.



Copper roofing on still another type of architecture, in Newton Highlands, Mass. Built by Davis & Vaughan.



Note how gracefully Economy Copper Roofing can be curved as shown above on a Middlebury, Conn., house.

roof. This minimizes danger of leaks at flashings when banked up snow and ice melt.

**Cools Faster**—A home owner in Fort Worth testifies: "I am glad to report that this copper roof was much cooler than other types of roof that hold the heat in Texas sometimes after midnight. Anaconda Copper will cool off in 15 minutes after the sun goes down."

**Protects Insulation**—This protection is highly important. Water or moisture impairs the efficiency of cellular insulating materials. A correctly installed copper roof is not only water-tight, but completely *moisture-proof*—ideal construction for an insulated home.

**Light Weight**—Economy Copper Roofing is much lighter in weight than wood, tile, asbestos or slate. Hence a heavy, more costly supporting structure is unnecessary.

**The Combination of these Advantages  
is Unsurpassed Value**

The ideal roof for homes and cottages could well possess all of these important advantages. In addition, it should be easy and inexpensive to install, and should require a minimum of expense for maintenance. Anaconda Economy Copper Roofing fulfills all of these requirements. Compare it, point by point, with other roofing materials, and you will see why Anaconda Economy Copper Roofing offers unexcelled value.



1936 "Good Housekeeping House", designed by Dwight James Baum, Architect, and built in Wychwood, Westfield, N. J.

## General Notes

**Standing Seams**—This type of joint is readily made, and has proved its efficiency in long service. The standing seam, which does not require solder, provides free movement for the expansion and contraction of the metal. Spacing between seams is approximately  $13\frac{3}{4}$  inches.

**Horizontal Seams**—The seams at the ends of each pan are of the simple flat-lock type,  $\frac{3}{4}$ " lap, unsoldered. Horizontal seams are staggered.

**Cleats**—No nails penetrate the sheets themselves, which are kept in place by copper straps (cleats), nailed to the roof deck every

12 inches along each vertical seam, and cross seams if desired, with flat-head copper nails.

**Valleys**—Ten-ounce Copper is considered satisfactory, but where the valleys drain large roof areas or extra rigidity is desired, copper weighing 16 ounces per square foot should be used.

**Soldering**—Installation is made without the use of solder, except in unusual instances where soldering is absolutely necessary to make flashing joints watertight.

**Pitch**—Economy Copper Roofing should not be applied on slopes of less than four inches to the foot.

**Sheathing**—Boards should be laid solid without open joints, parallel to ridge. Sheathing boards are covered with 15-pound asphalt-saturated felt.

**Re-Roofing**—Anaconda Economy Copper Roofing is of course as suitable for old roofs as for new, but it should not be applied directly over old roofing materials.

# ANACONDA SHEET COPPER

## For non-rust Gutters, Rainpipes, Flashings

REGARDLESS of the type of roofing, extreme care should be used in selecting the metal which is needed for the *roof drainage* system. Repairs and replacements are an item of future expense that can easily be avoided.

Valleys, gutters and rain-pipes should by all means be made of copper. Rain water, concentrating in the valleys and gutters, and rushing in flood volume to the downspouts, severely tests rust-weakened metal. That is why metals that rust usually last only five to eight years, while copper serves a lifetime.

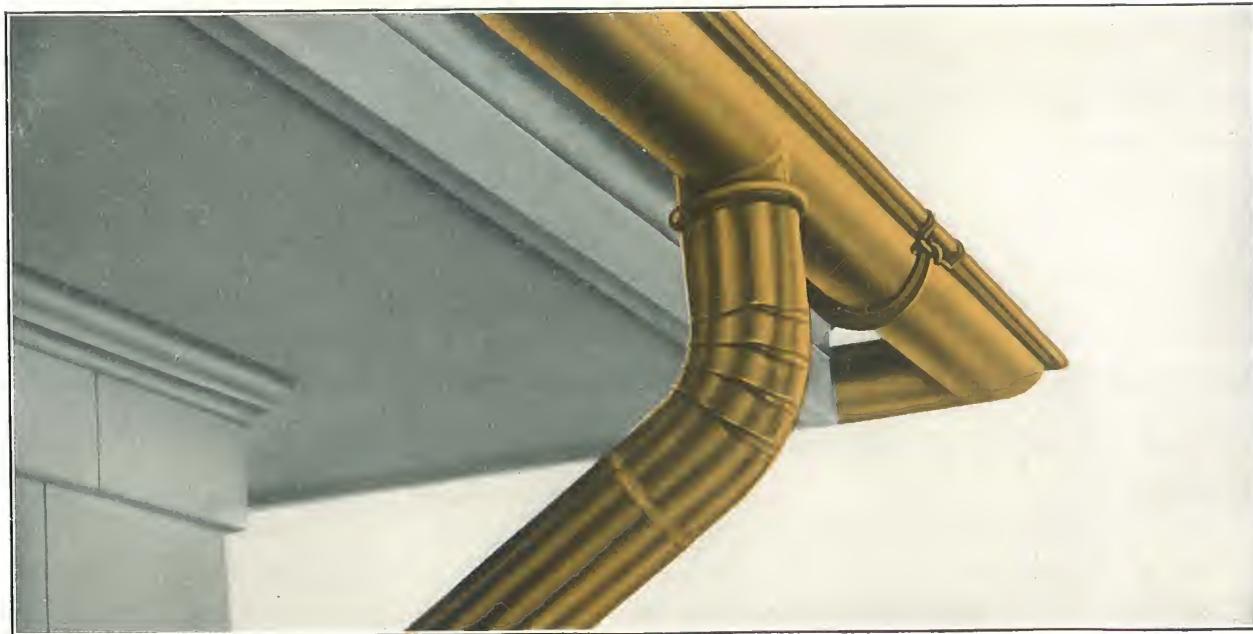
The same is true of flashings—strips of metal used to weather-proof the roof wherever it comes in contact with chimneys, dormer windows or other projections. It is most important that the metal used be copper because ferrous flashings will soon rust, admitting

water to rot the woodwork and perhaps to cause considerable damage to the interior of the house.

Copper sheet metal work is not expensive. Though it does cost slightly more in the beginning, it saves far more in the end by forever eliminating upkeep expense due to rust. Copper, for instance, never need be painted, but if ferrous metal is used, constant painting to delay rust adds another annoying expense.



Many homeowners are insisting on copper. They have found that, no matter how "cheap" rustable gutters and rain-pipes seem to be, they always cost far more in the end.





# **CLEAN RUST-FREE WATER**

## **FROM TROUBLE-FREE PIPING of COPPER or BRASS**

**A** FULL FLOW of rust-free water—*at all times*. That is the demand of the tenant and owner, and the goal of the architect. The realization that rustable water pipe, resulting in eventual repair or replacement, is not economical, has led to a pronounced increase in the specification and use of brass and copper for water supply, heating and air conditioning lines.

### **Permanent Pipe Needed**

The need for permanent pipe was not as great a generation ago as it is today. Then piping was exposed and accessible, and labor costs were lower. Replacements were expected, and relatively inexpensive. Nevertheless, there are many authentic records of 19th century brass pipe installations that have justified the foresight of their original owners by a half-century and more of trouble-free, uninterrupted water service.

Rust—the most common cause of pipe troubles—results in rust-colored water, reduced flow, and eventually in leaks. With

present-day piping usually concealed behind walls and under floors, repairs and replacements cause serious expense and annoyance. The cost of pipe renewals usually amounts to many times the initial saving that rustable pipe seems to offer. Realizing this, it is logical that thoughtful homeowners are turning so generally to non-rusting metal—to avoid the possibility of future rust troubles.

Other factors further emphasize the need for permanent pipe. The corrosiveness of public water supplies is in itself a serious problem. Present standards of sanitation have broadly extended the chemical treatment of domestic waters, in many cases increasing their corrosiveness.

The effective resistance to corrosion that brass or copper pipe and copper tubes offer meets a nation-wide need. Correctly installed, they provide dependable and economical protection against pipe failures due to rust. Their additional cost is slight in relation to the total plumbing cost, and negligible in relation to the total cost of the home.

## ANACONDA "85" RED BRASS PIPE

REG. U. S. PAT. OFF.

### 85% Copper—For Highly Corrosive Waters

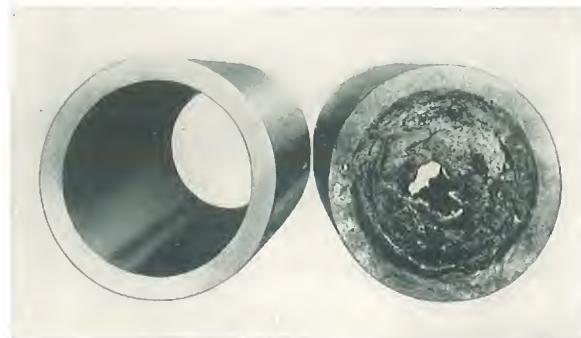
WHERE THE CORROSIONESS of water is known to be exceptionally severe, a permanent water supply can be assured only by use of pipe with extraordinary resistance to corrosion.

Such corrosive conditions are very often found in localities drawing on mechanically filtered supplies without further treatment. These waters may be relatively low in hardness, high in carbonic acid gas content and low in alkalinity—pH value 5 to 6.5. Ground waters from shallow artesian wells or large dug wells and colored waters from peaty sources usually fall under this classification. There is a growing tendency to treat such waters, not only to neutralize the carbonic acid gas, but to make the water high in alkalinity with pH value around 9 or 10. Anaconda 85 Red Brass Pipe is recommended for use with such types of water. It offers the greatest resistance to corrosion of any water

pipe commercially obtainable at moderate cost.

Anaconda 85 Red Brass Pipe is also recommended for underground service lines assembled with threaded connections.

*There are certain conditions, depending upon the character of the water, when 85 Red Brass Pipe should be tinned. Additional information furnished on request.*



*This photograph shows brass pipe (left) and rustable pipe (right) after identical service. This is a graphic illustration of the extent to which rust may interfere with service even though leaks have not developed.*

## ANACONDA "67" BRASS PIPE

REG. U. S. PAT. OFF.

### 67% Copper—For Normally Corrosive Waters

ANACONDA 67 Brass Pipe can be depended upon to give lasting service in all localities where normal conditions prevail; that is, where the water has a low permanent hardness, a fair degree of temporary hardness, is low in carbonic acid gas content, or is only slightly alkaline.

#### Corrosiveness of Water is Subject to Change:

It should be borne in mind, however, that the corrosiveness of domestic waters is subject to radical changes, due principally to the introduction of new purification methods and

to the need for additional sources of supply to meet the constantly growing requirements of most communities. As a result, waters that are only normally corrosive today may be highly so in a few years.

*Consequently, when specifications call for standard-size pipe assembled with threaded "screw-type" connections, The American Brass Company recommends the use of Anaconda "85" Red Brass Pipe in every instance where it is not definitely known that the water supply is only normally corrosive, or where there is a possibility that changing conditions may in the future increase the corrosiveness of the local water supply.*

## ANACONDA COPPER WATER TUBES

### For Low Cost, Rust-Proof Plumbing and Heating Lines

WHERE low cost is of primary importance, Anaconda Copper Tubes and Anaconda Solder-Type Fittings are finding widespread use. A complete installation costs but a little more than one of short-lived rustable pipe and fittings. This low cost is due to the fact that solder-type joints eliminate threading—making possible lighter tube walls, less weight per foot and a corresponding reduction in cost. Labor costs are also minimized. However, such important points as thorough cleaning, correct heat, proper fluxing and the right solder make it imperative to employ an experienced plumbing contractor.

Mechanically, such a piping system provides more than ample strength where conditions of pressure and temperature are normal.

In this respect, copper tubes are ideally suited to hot and cold water lines in houses.

With rust-proof piping available at such reasonable cost, it is evident that its use affords definite, worthwhile savings, in addition to the convenience of a full flow of rust-free water, year in and year out.

Anaconda Copper Tubes are furnished in three wall thicknesses: Types "K", "L" and "M". Type "K", the heaviest, is furnished for underground service and general plumbing. Type "L" Tubes are suitable for interior plumbing. Although Type "M" Tubes have been used, Types "K" and "L" are preferred because their more substantial wall thicknesses provide a greater margin of safety.

*There are certain conditions, depending upon the water, when copper tube lines should be tinned. Additional information furnished on request.*



*Cut-away section showing completed joint of tube and solder fitting. Note the generous depth of the cup and the accurate fit at the end of the tube. This practically eliminates resistance to the flow of water.*

# FOR HEATING LINES

## Copper Tubes Speed Up Circulation, Cut Heat Losses, Give Greater Efficiency

**A**N INSTALLATION of Anaconda Tubes and Fittings increases the efficiency of hot water heating systems. Both tubes and fittings have smooth inside surfaces which reduce resistance to the flow of water . . . a feature which is especially valuable in forced circulation systems. Hot water, conveyed through bright, uninsulated Anaconda Copper Tubes, loses only about one-half as much heat as is lost when uninsulated black iron of the same nominal size is used. Heat conservation with copper is further increased with the use of smaller sizes—possible because of the permanent smoothness and durability of copper tubes. With quicker circulation and reduced heat losses, maximum heat is delivered to radiators in the least possible time.

Another advantage of Copper Tubes is that when installed without covering, the gleaming metal enhances the appearance of the cellar and basement room used for recreational purposes.

### Anaconda Solder-Type Fittings

The natural law of capillary attraction is the principle on which the design of Anaconda Solder-Type Fittings is based. Metal workers have employed this principle for years in sweating sections of pipe together. Solder will flow by means of capillary attraction vertically upward between two closely fitted tubes to a height many times the distance required to make a solder joint, regardless of the size of the fittings.

\* \* \*

Anaconda Fittings are available in both wrought copper and cast bronze. The com-



plete Anaconda line includes a solder-type fitting for every copper tube requirement in plumbing, heating and drainage. Anaconda Copper Water Tubes are furnished both hard and soft. Both tubes and fittings are made to the accurate, standardized dimensions so essential for sound, leakproof joints.

Look for the Anaconda trade-mark on fittings, and the name "ANACONDA" stamped in copper tubes. It is your assurance of careful manufacture and dependable quality.

STRONG, NON-RUSTING

**EVERDUR METAL**

FOR

**WATER TANKS**

"EVERDUR" IS A TRADE-MARK OF THE AMERICAN BRASS COMPANY  
REGISTERED IN THE UNITED STATES PATENT OFFICE.

**PLENTY OF CLEAN HOT WATER**

A PLENTIFUL SUPPLY of clean hot water is regarded as a necessity to health and comfort in the home of today. Yet sparkling hot water may be expected, year in and year out, only when the hot water tank is made of metal that cannot rust.

This is easy to understand—because hot water causes rust to form even faster than cold water.

A glance at the illustrations below reveals how rust, once started, continues to attack ordinary tank metal.

**EVERDUR—Ideal Tank Metal**

Steel and copper were long the standard materials for hot water storage tanks. Each possessed distinct advantages. Steel offered high strength and economical fabrication, but was subject to rust and corrosion which tainted water, and in time weakened tank metal to a point below the limit of safety. Copper has provided the corrosion-resistance so often essential to long, economical service, but has lacked the physical properties needed for economical tank construction.

Everdur Copper-Silicon Alloy combines the corrosion-resistance of pure copper with the tensile strength of steel. Moreover, its ease of welding makes it possible to manufacture Everdur tanks of virtually one-piece construction at lower cost than pure copper tanks, which are usually brazed and riveted.



## SIZES AND TYPES

Everdur tanks in service today range in size from one gallon fuel containers for gasoline stoves to 20,000 gallon pressure vessels operating in chemical process work. They are in service in laundries, textile plants, hotels, hospitals, schools, office buildings, apartment houses and homes.

## AUTOMATIC HEATERS

Because Everdur is so strong, and can be so economically and perfectly welded, important manufacturers of automatic gas, electric and oil heaters, with very few exceptions, have adopted Everdur tanks as standard equipment for rustproof models.

Everdur tanks provide high efficiency and most economical operation for underfired hot water heaters. There can be no accumulation of rust from tank corrosion at the bottom of the vessel to insulate the water from the heating element.

Further information on automatic heaters with Everdur tanks can be obtained from your local Gas or Electric Company, or your local plumbing contractor.

## TESTING EVERDUR TANKS

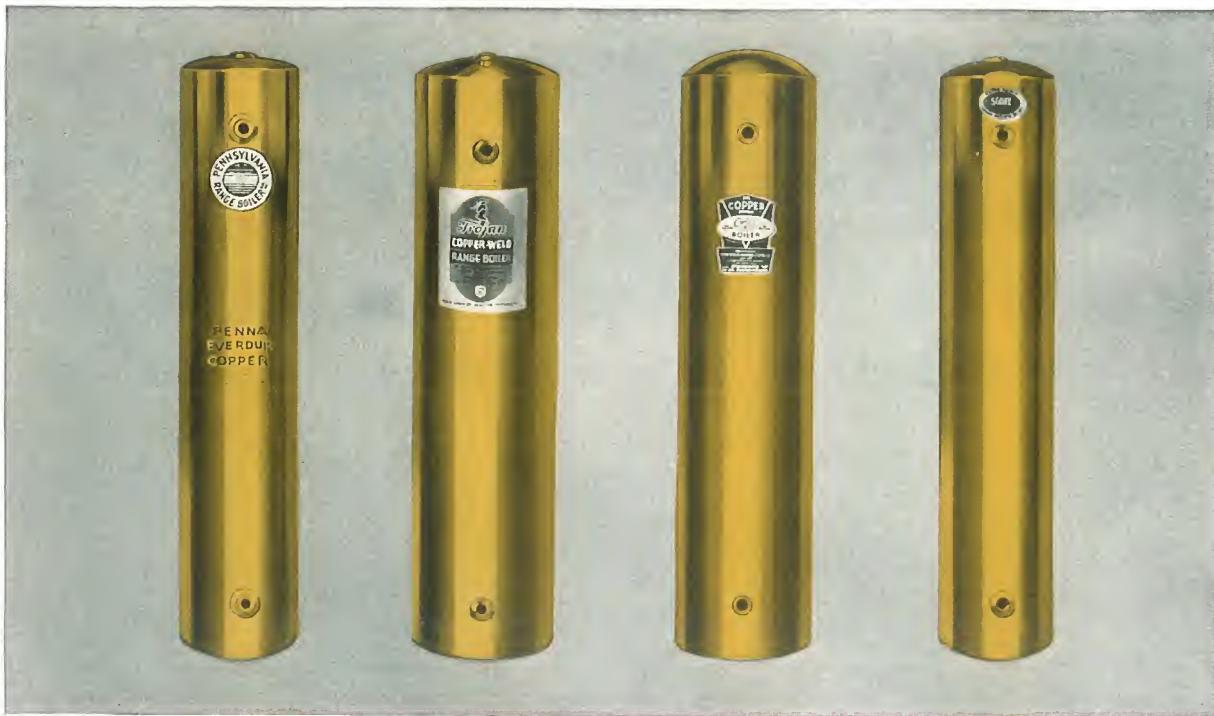
Everdur tank units for domestic heaters have been subjected to the most drastic tests. One manufacturer making an all-welded tank from Everdur plates applied a test known as the "breather." It consists of pulsating pressure in the tank from 0 to 150 pounds, 13 times a minute. Five hundred hours of this test are considered the equivalent of 20 years of normal service. Everdur tanks have been held on this test for over 1,000 hours without showing signs of leaks or distortion.

This drastic test demonstrates the great



*Typical welded Everdur tank as used in automatic water heaters.*

strength of Everdur Metal, but it must be remembered that under no circumstances should any domestic water tank, regardless of the metal of which it is made, be operated without a suitable pressure relief valve.



## EVERDUR STORAGE TANKS (Range Boilers)

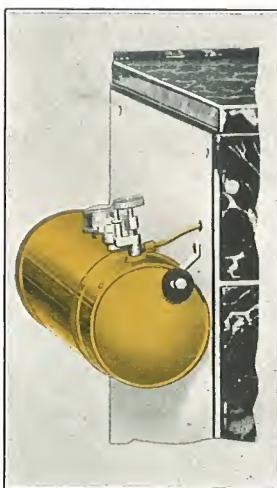
When an automatic storage heater is not used, the hot water is generally kept in a storage tank, or "range" boiler. Thirteen leading manufacturers of such tanks have adopted Everdur Metal for non-rust units.

Used with the different types of independent heating units, range boilers in the past

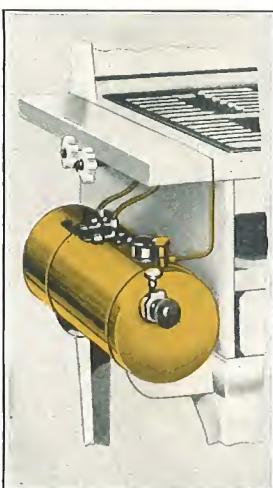
have been made principally of steel—although copper has always been used in sections of the country where the water supply is highly corrosive. However, welded Everdur tanks have offered many production economies, with the result that the price differential between the rusting and non-rusting kind has been considerably reduced.

Home owners, no longer content with rusty hot water, or frequent repairs and periodic replacements, are installing welded Everdur storage tanks. These are generally available from plumbing contractors in all standard sizes and for standard pressures.

### FUEL TANKS, TOO, are being made of Everdur



Everdur gasoline stove fuel tank, American Gas Machine Co., Albert Lea, Minn.



Everdur gasoline stove fuel tank, Coleman Lamp & Stove Co., Wichita, Kansas.

Gasoline-fired ranges, stoves, radiant heaters and other similar equipment are available with fuel tanks of welded Everdur. Being strong, and highly resistant to corrosion, Everdur gasoline tanks provide maximum safety.

# For better, more durable paint

## ANACONDA WHITE LEAD



ORDINARY



ANACONDA

*The paint films shown above were prepared by dropping paint on rapidly whirling glass plates, thus retaining a very thin film which outlines granular particles. As shown, ordinary lead paints are sandy in comparison with ANACONDA.*

Today as always, white lead paint is regarded as best for exterior gloss and interior flat uses. Furthermore, at today's low prices (Summer, 1938) white lead costs no more per gallon than most other paints. But, of more importance, no paint serves at less cost per square foot per year than white lead. White lead covers better, goes farther and spreads faster. This means fewer gallons and fewer hours on the job. Lasting longer, washing well, wearing evenly, white lead leaves a smooth surface for repainting.

### Why ANACONDA White Lead?

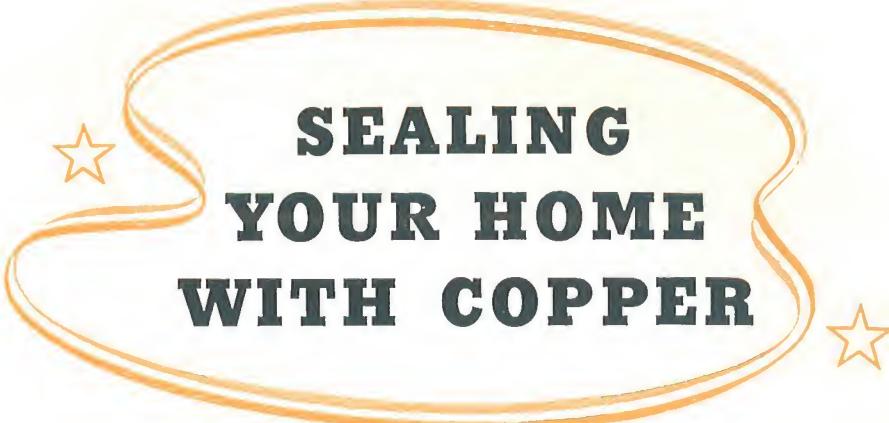
Anaconda White Lead is whiter, brighter, smoother, and purer than any other white lead—because it is the only white lead made by Electro-Chemistry. This patented Anaconda process automatically excludes the impurities found in ordinary white lead. Rigid control

throughout manufacture permits over 80 physical, mechanical and chemical tests *daily* to insure *perfect uniformity*.

Test comparisons of Anaconda and other white leads show that Anaconda is definitely whiter and brighter. Homes painted with Anaconda White Lead *do* look fresh longer. And for interior flat paints, the extreme whiteness of Anaconda White Lead makes possible cleaner, purer tints—particularly important when you want the full beauty of delicate pastel shades. Thoroughly ground in the finest linseed oil, it is available through leading paint jobbers and dealers. For further information on Anaconda White Lead, check and use the postcard on page 27.



ANACONDA WHITE LEAD IS MADE BY INTERNATIONAL SMELTING AND REFINING COMPANY, PIGMENT DIVISION, EAST CHICAGO, INDIANA (SUBSIDIARY OF ANACONDA COPPER MINING COMPANY).



## SEALING YOUR HOME WITH COPPER

### ANACONDA "Electro-Sheet" COPPER

A RECENT DEVELOPMENT by the technical staff of the Anaconda Copper Mining Company now makes it possible to damp-proof and weatherproof your home with permanent copper for very little more than you would have to pay for the perishable materials that have necessarily been used in the past.

This new material, known as "Electro-Sheet", is pure copper produced in very thin gauges by electrical deposition. It is strong and ductile, and provides a lasting seal against wind, weather and moisture. It affords invaluable protection to cellular insulating materials. In winter, it keeps cold out and heat in; in the summer it helps to keep the house cool.

#### WEATHER-PROOFING AND DAMP-PROOFING

It is generally recognized that both comfort and heating economy in a home depend to a great extent upon the efficiency of the outside walls in acting as a barrier against heat, cold, wind and dampness. The tendency towards equalization of temperatures between the inside and the outside is brought about principally by two causes—*infiltration* and *conduction*.

"Electro-Sheet" Copper may be employed wherever building paper is used, and applied by much the same methods. And it costs but little more than high grade building paper.

Applied to foundation walls and cellar floors it keeps basements dry. The foundations and walls of a house damp-proofed and weather-proofed with "Electro-Sheet" are virtually encased in an envelope of enduring Copper.

Anaconda "Electro-Sheet" Copper for damp-proofing and weatherproofing is available in 30, 50, and 60-inch widths and weights of 1 ounce and 2 ounces per square foot, either plain or bonded to felt, papers or rubber compounds.

#### WEATHER-PROOFING AND DAMP-PROOFING

**INFILTRATION** is the passing of cold or warm air, moisture or dust through the joints and pores of ordinary building materials.

"Electro-Sheet" Copper is not subject to deterioration and when applied as shown on the next page provides a permanent airtight barrier. It affords the most economical and practical method of preventing infiltration through the surfaces to which it is applied.

**CONDUCTION** through a building wall is the transference of heat in or out of the building due to the tendency of heat to pass through all materials in various degrees.

This may be overcome by installing cellular insulating materials, a practice which is being followed in many homes being constructed today.

Since most insulating materials are effective only when dry, it is quite important to have the insulation protected on the outside by a lining of "Electro-Sheet" Copper.

### **CLAPBOARD OR WOOD SHINGLE EXTERIORS**

Clapboards or wood shingles as commonly applied to the exterior sides of buildings are never airtight and seldom completely weatherproof. In order to minimize infiltration from this type of wall a single ply of 1-oz. "Electro-Sheet" can be face nailed to the outside of the sheathing boards.

### **STUCCO EXTERIOR**

Where stucco on metal lath is employed for outside wall facing, efficient waterproofing is of the utmost importance. One layer of 2-oz. "Electro-Sheet" applied in horizontal courses against the sheathing and securely held in position by furring strips will protect the sheathing against moisture.

### **BRICK OR STONE VENEER EXTERIOR**

Brick or stone veneer outside a wood framed and sheathed house represents a common type of construction. A single ply of 2-oz. "Electro-Sheet" nailed onto the face of the sheathing, with the bottom flashed so as to lead any moisture penetrating through the veneer to the outside, will protect the woodwork from water both during construction and after. "Electro-Sheet" applied in this way also mini-

mizes infiltration and makes the wall surfaces as nearly airtight as possible.

### **ATTIC FLOOR LINING**

Loss of warm air by outward filtration is most marked at the roof because of the tendency of warm air to rise. By applying a thin membrane of copper to the top of attic joists, clamping the edges of the sheets down with furring strips, and nailing the attic flooring over the strips, two dead air spaces are created, which, with the practically airtight copper membrane, will have a very desirable effect as regards heating and air conditioning.

Maximum efficiency is achieved when this construction is used in conjunction with cellular insulation. The copper will protect the insulation from moisture, and will prevent the loss of heat by outward filtration.

### **VAPOR SEAL AGAINST CONDENSATION**

Use of insulation and of air conditioning increases the possibility of condensation in building walls during cold weather. Tighter construction, by not allowing moisture to evaporate to the outdoors, also builds up higher relative humidities and increases the danger of harmful condensation within the walls. Under such conditions it is advisable



*Copper Vapor Seal has been fastened to inside of studs over insulating material. As this room will be plastered, metal lath is shown partially applied (at top) over the copper.*

to provide a vapor seal on the inside of the studding as well as a weatherproofing shield under the outside covering, particularly masonry veneer or stucco.

The preceding picture shows the application of "Electro-Sheet" Copper to the inside edge of the studs to serve as a vapor seal. Applied as indicated, with all laps tightly clamped, an impervious barrier is provided through which moisture-laden air cannot percolate to condense its vapor as water in the walls. At the same time this inside seal gives added protection against infiltration with a consequent greater saving in fuel.

#### **CELLAR DAMP-PROOFING AND WATER-PROOFING**

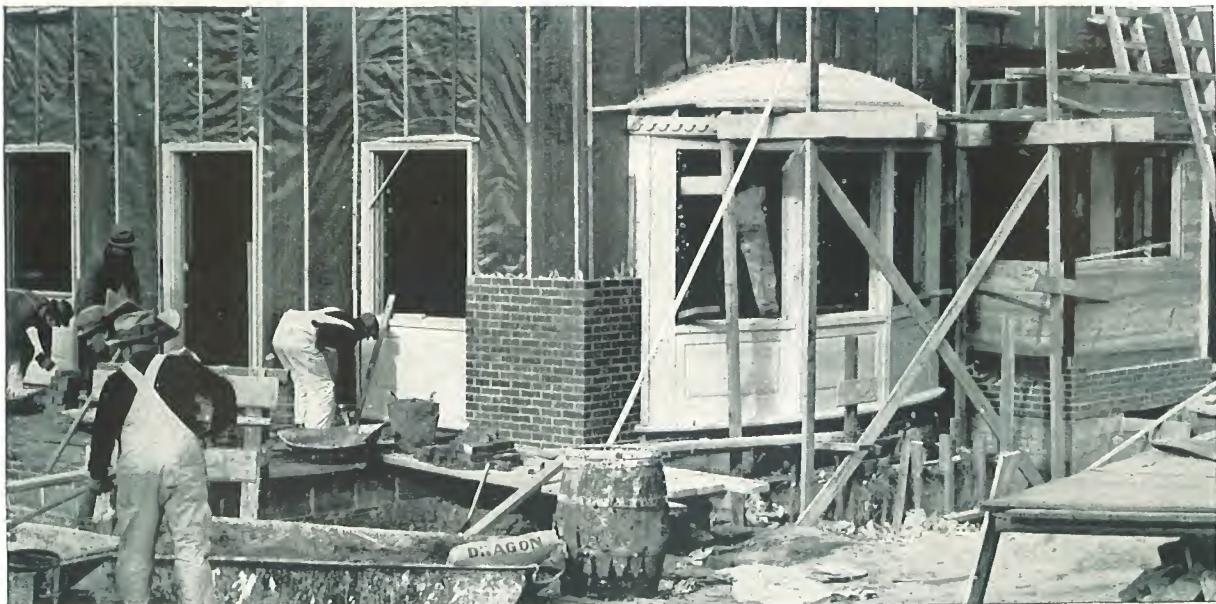
The most effective method of cellar waterproofing is the application of sheets or layers of water-proof material on the outside of the cellar walls. This keeps the masonry dry, resulting in a minimum of movement in the structural materials.

"Electro-Sheet" Copper is ideally suited for this use, because it is rust-proof, strong,

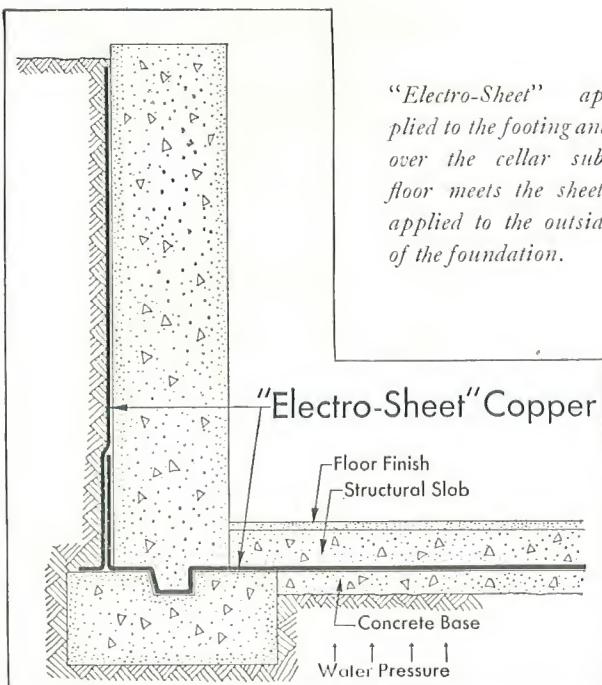


*Applied with suitable mastic, this pure copper weighing 2 ounces per square foot is being securely bonded to the outside of foundation wall. Permanent damp-proofing!*

ductile and can be applied readily. For waterproofing where a hydrostatic head exists, two plies of 2 oz. "Electro-Sheet" are usually applied with pitch, asphalt or other mastic. Where only damp-proofing is wanted, one ply should be sufficient. The "Electro-Sheet" is also applied to the concrete footing before the foundation wall is laid, extending through to join the "Electro-Sheet" water-proofing laid between the cellar sub-floor and the finished floor. This should provide complete protection against water and dampness entering the cellar.



*"Electro-Sheet" plain or bonded to building paper will keep air and moisture from penetrating the walls.*



### Architect Praises "Electro-Sheet"

... In the building of a frame house in Mariemont, Ohio, "Electro-Sheet" Copper weighing one ounce per square foot was installed between wall sheathing and siding, roof sheathing and shingles, and under the attic floor. The architect for this house has since written:

*"During zero winter weather, this house is very easily heated with a hot water system for an insulated house of this size. Also, during the summer, when temperatures hover around 100 degrees, or higher for more than a week, the occupants state that the interior of the house is quite cool and comfortable. I can freely recommend copper used in this manner as a very economical means of preventing heat losses."*

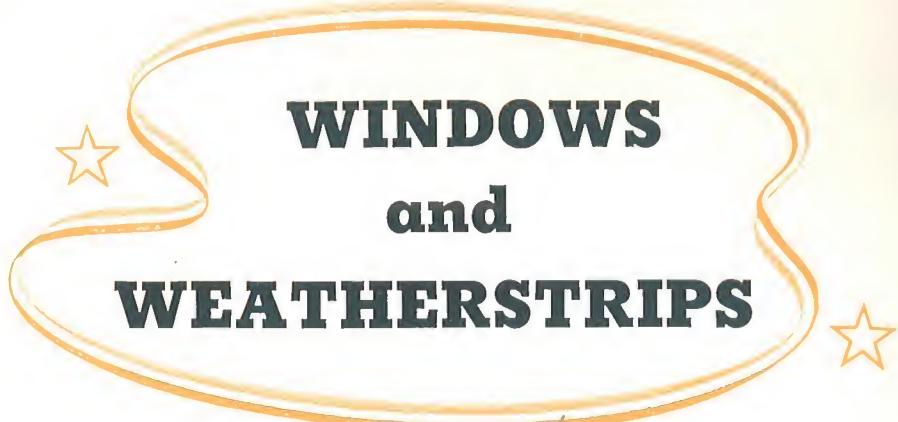
### TERMITE-PROOFING

The most effective safeguard against termite damage is a copper shield inserted between the masonry foundation and sills. This shield, where it extends beyond the foundation wall, should be bent down at a  $45^{\circ}$  angle allowing a minimum of 2 inches between the edge of shield and the foundation.

*For complete information on termite destruction and detailed methods for applying Copper safeguards, address The Copper and Brass Research Association, 420 Lexington Avenue, New York, N.Y.*

Copper weighing 16 to 20 oz. per sq. ft. (the heavier is less liable to mechanical injury) has been used for some time in this manner. The material is relatively inexpensive, easily applied, highly effective and permanent. Any experienced sheet metal contractor can form and install copper termite shields.





# **WINDOWS and WEATHERSTRIPS**

## **BRONZE WINDOWS NOW AVAILABLE AT ATTRACTIVE PRICES**

WITH ATTENTION focused on heat conservation, insulation, air conditioning and other related subjects which all have a bearing on health, comfort and economy, the window rightly comes in for more and more scrutiny. For poorly fitted windows will set to naught the efficiency of thorough wall insulation. Primary requisites of the modern window are 1. Permanently tight, accurate fit; 2. Easy operation; 3. Maximum vision. Hence metal windows, particularly those of bronze, come into their own. Today standardization of design and increased production have resulted in attractive prices for bronze windows.

Both double hung and casement type windows are now available in enduring Bronze. Most of these are sold as a unit, complete with weatherstripping and glazing. Some double hung bronze windows compare favorably in price with ordinary wood windows. All offer definite advantages, and in general it may be said that durability, freedom from upkeep expense and important fuel savings more than make up for whatever slight extra investment is made in bronze windows.

### **BRONZE SASH CHAINS**

Double hung windows are usually counterbalanced by sash weights at the end of ropes or chains operating over pulleys. Bronze sash chain is not expensive . . . yet it can never fray, rot or rust. Once installed, bronze chains

insure smoother, easier operation—not for just a few years, but indefinitely.

### **BRONZE WEATHERSTRIPPING**

Reliable authorities estimate that from 20% to 40% of heating costs are wasted every winter unless windows and doors are properly weatherstripped. Without weatherstripping, heat leaks out and cold seeps in—whether the windows are wood or metal. (For air-conditioned buildings, weatherstrips are a necessity). Surely you can't afford this waste, and surely you want the even, comfortable, *healthful* temperature you can maintain by weatherstripping.

And remember that careful, accurate installation of strips is all-important. If they aren't tight, and don't stay tight year after year, their inefficiency reduces your saving. For the best and longest service, use bronze.

Bronze weatherstrips can't rust, can't disintegrate. Tough and strong, they provide permanent "spring" qualities and the greatest resistance to accidental damage.

Anaconda Bronze is standard with leading manufacturers of metal weatherstrip. It is guaranteed by some for the life of the building.

For weatherstripping doors, extruded bronze saddles at the base add the finishing touch to the ideal job. They look well; they are tough, long wearing and efficient.

# INSECT SCREENS OF BRONZE

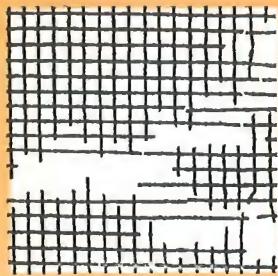
Guard Your  
Health and  
Save Your  
Money

FROM the standpoint of expense, screens of Bronze Wire are the most economical you can use. Remember that screen wire is very fine and quickly rusts through if made of rustable metal. That is why well-built homes everywhere are equipped with screens of bronze wire. Bronze is strengthened copper. It cannot rust. Bronze Screens remain trim and tight for years with a minimum of attention—they do not even require painting.

Instances are not exceptional where bronze screens have been in service for 30 years and are still in good condition. It may be conser-

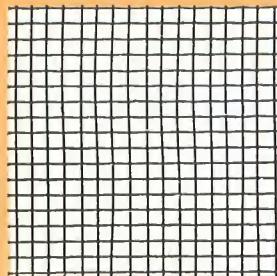
vatively stated that the life of Bronze Screening is limited only by accidental breakage. Yet its cost is so low (only about 40c more than rustable screening per full-window), that it pays for itself many times over during its long years of service.

Screens with bronze frames are readily available from leading manufacturers. Although costing more than wood frames, bronze frames can never warp or split, never need painting. They add a note of richness and distinction, not only when they are new but season after season—indefinitely.



RUSTABLE SCREENING

*Exposed side by side for the same length of time, the condition of this screen cloth speaks for itself. At the end of the test, the bronze was good as new.*



BRONZE SCREENING



# **WARNING!**

## ***Insist on Standard Weight Bronze Screen Cloth***

**I**N RECENT YEARS there has been an increasing amount of sub-standard bronze screen cloth made and sold in the United States. Although it represents only a relatively small portion of the total, the danger of obtaining it unknowingly is ever-present. So make certain that your bronze screen cloth is made of wire which measures .0113 inches in diameter. This is the standard set in specifications of the U. S. Government and the Wire Screen Cloth

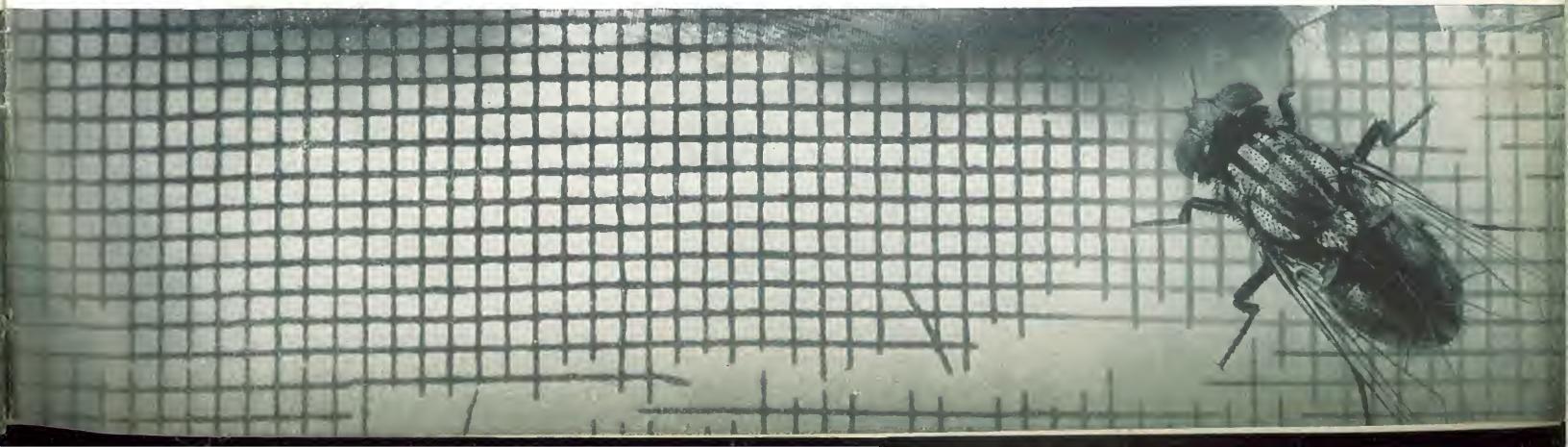
Manufacturers' Institute. Cloth made of this standard wire, woven 16 meshes to the inch, weighs no less than 15 pounds per 100 square feet.

The American Brass Company does not make screens or screen cloth, but as the leading manufacturer of Bronze Wire for use in the fabrication of screen cloth, we naturally wish to safeguard the reputation of Bronze for "lifetime" service. We are convinced that while sub-standard bronze screen cloth will satisfactorily resist corrosion, it lacks the physical strength to withstand the abuse to which all screens are occasionally subjected.

In your own interest, be sure that *your* bronze screen cloth is made of standard gauge wire—that "16-mesh" screening weighs 15 pounds per 100 square feet.

### **Only Standard Weight Bronze Screen Cloth**

- Lies flat—does not bulge and twist
- Has a firm, solid "feel"—is easier to handle and frame
- Is a high strength material—does not dent easily
- Gives the long, expense-free service to be expected of bronze
- Weighs 15 lbs. per 100 sq. ft. in 16 mesh cloth





## **CONSULT YOUR ARCHITECT**

FROM THE VOLUME of material presented between the covers of this book, it must be apparent to most homebuilders that the maze of new developments and improved building practices require the advice, consultation and planning which only an experienced architect can give. This has never been more true than it is today. For who better than your architect can coordinate all the information on hundreds of structural and engineering advancements, can tell you what is right, what is advisable, and then mold all desirable items into a unified whole—a house planned and built according to your taste—with everything considered in relation to everything else, and nothing left to chance.

### **ANACONDA METALS**

No one will question that the better a house is built, the longer it will last, and the less it will cost for maintenance and repair in the years that lie ahead. In building, we urge you to consider this carefully, and to discuss it with your architect, builder and contractors. For sound construction goes beneath the surface to unseen things, where so often metals less durable than copper or brass prove far more costly in the end.

### **FURTHER INFORMATION**

You can get complete information on any Anaconda product by writing to THE AMERICAN BRASS COMPANY, GENERAL OFFICES, WATERBURY, CONNECTICUT, or to any of the district offices and agencies listed on the following page.

# THE AMERICAN BRASS COMPANY

*General Offices:* WATERBURY, CONNECTICUT



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